

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A combustion method for NO_x reduction by suppressing temperature of combustion gas derived from a burner, comprising the steps of:

~~a NO_x reduction step for reducing NO_x by suppressing combustion gas temperature in such a manner that suppression of NO_x generation is preferred to reduction of exhaust CO value, thereby keeping NO_x value not more than a specified value 10 ppm at 0% O₂, in the exhaust gas, dry basis; and~~

~~a CO reduction step for thereafter reducing exhaust CO value resulting from the NO_x reduction step to not more than a specified value.~~

2. (Original) A combustion method for NO_x reduction as claimed in claims 1, wherein the NO_x reduction step is performed with an excess air ratio which is determined from a NO_x reduction target value and an excess air ratio versus NO_x characteristic of the NO_x reduction step.

3. (Currently amended) ~~A combustion method for NO_x reduction as claimed in claims 1,~~

A combustion method for NO_x reduction by suppressing temperature of combustion gas derived from a burner, comprising:

a NO_x reduction step for suppressing combustion gas temperature in such a manner that suppression of NO_x generation is preferred to reduction of exhaust CO value, thereby keeping NO_x value not more than a specified value; and

a CO reduction step for thereafter reducing exhaust CO value resulting from the NO_x reduction step to not more than a specified value;

wherein the CO reduction step is performed with a CO oxidation catalyst member.

4. (Currently amended) A combustion method for NO_x reduction by suppressing temperature of combustion gas derived from a burner, comprising: a NO_x reduction step for suppressing combustion gas temperature in such a manner that suppression of NO_x generation is preferred to reduction of exhaust CO value, thereby keeping NO_x value not more than 10 ppm [[()]] at 0% O₂ in the exhaust gas, dry basis [[()]]; and a CO reduction step for thereafter reducing exhaust CO value resulting from the NO_x reduction step to not more than a specified value.

5. (Original) A combustion method for NO_x reduction as claimed in claims 4, wherein the NO_x reduction step is performed with an excess air ratio which is determined from a NO_x reduction target

value and an excess air ratio versus NO_x characteristic of the NO_x reduction step.

6. (Original) A combustion method for NO_x reduction as claimed in claims 4, wherein the CO reduction step is performed with a CO oxidation catalyst member.

7. (Currently amended) A combustion method for NO_x reduction by suppressing temperature of combustion gas derived from a burner, comprising the steps of: a NO_x reduction step for reducing NO_x production by suppressing combustion gas temperature in such a manner that suppression of NO_x generation is preferred to reduction of exhaust CO value, thereby keeping NO_x value not more than a specified value 10 ppm at 0% O₂ in the exhaust gas, dry basis; and a CO reduction step for thereafter reducing exhaust CO value resulting from the NO_x reduction step to not more than a specified value, the CO reduction step being performed in a zone where the combustion gas temperature is not more than 900°C.

8. (Original) A combustion method for NO_x reduction as claimed in claims 7, wherein the NO_x reduction step is performed with an excess air ratio which is determined from a NO_x reduction target value and an excess air ratio versus NO_x characteristic of the NO_x reduction step.

9. (Currently amended) ~~A combustion method for NO_x reduction as claimed in claims 7, A combustion method for NO_x reduction by suppressing temperature of combustion gas derived from a burner, comprising: a NO_x reduction step for suppressing combustion gas temperature in such a manner that suppression of NO_x generation is preferred to reduction of exhaust CO value, thereby keeping NO_x value not more than a specified value; and a CO reduction step for thereafter reducing exhaust CO value resulting from the NO_x reduction step to not more than a specified value, the CO reduction step being performed in a zone where the combustion gas temperature is not more than 900° C;~~

wherein the CO reduction step is performed with a CO oxidation catalyst member.

10. (Original) A combustion apparatus for NO_x reduction by suppressing temperature of combustion gas derived from a burner, comprising: NO_x reduction means for suppressing combustion gas temperature in such a manner that suppression of NO_x generation is preferred to reduction of exhaust CO value, thereby keeping NO_x value not more than a specified value; and CO reduction means for reducing exhaust CO value resulting from the NO_x reduction means to not more than a specified value.

11. (Original) A combustion apparatus for NO_x reduction as claimed in 10, wherein the NO_x reduction is performed with an excess air ratio which is determined from a NO_x reduction target value and an excess air ratio versus NO_x characteristic of the NO_x reduction means.

12. (Original) A combustion apparatus for NO_x reduction as claimed in claims 10, wherein the CO reduction means is a CO oxidation catalyst member.

13. (Original) A combustion apparatus for NO_x reduction as claimed in claims 10, wherein the NO_x reduction means is implemented by heat transfer tubes having a space formed by removing heat transfer tubes.

14. (Original) A combustion apparatus for NO_x reduction as claimed in claims 10, wherein the NO_x reduction means is implemented by heat transfer tubes having no space formed by removing heat transfer tubes.

15. (Currently amended) A combustion apparatus for NO_x reduction by suppressing temperature of combustion gas derived from a burner, comprising: NO_x reduction means for suppressing combustion gas temperature in such a manner that suppression of NO_x

generation is preferred to reduction of exhaust CO value, thereby keeping NO_x value not more than 10 ppm [[()]] at 0% O₂ in the exhaust gas, dry basis [[()]]; and CO reduction means for reducing exhaust CO value resulting from the NO_x reduction means to not more than a specified value.

16. (Original) A combustion apparatus for NO_x reduction by suppressing temperature of combustion gas derived from a burner, comprising: NO_x reduction means for suppressing combustion gas temperature in such a manner that suppression of NO_x generation is preferred to reduction of exhaust CO value, thereby keeping NO_x value not more than a specified value; and CO reduction means for reducing exhaust CO value resulting from the NO_x reduction means to not more than a specified value in a zone where the combustion gas temperature is not more than 900°C.

17. (New) A combustion apparatus for reducing NO_x production by suppressing combustion gas temperature, comprising:

a boiler body;
an exhaust gas passage;
an exhaust gas recirculating passage directing exhaust gas from said exhaust gas passage into said boiler body to reduce combustion gas temperature in such a manner that suppression of

NO_x generation is preferred to reduction of exhaust CO value, thereby keeping NO_x value not more than a specified value; and a CO oxidation catalyst member.

18. (New) A combustion apparatus for reducing NO_x production by suppressing combustion gas temperature, comprising:

a boiler body including a burner;

an air inlet passage providing air to said burner;

a steam addition tube introducing steam to said air inlet passage to reduce combustion gas temperature in such a manner that suppression of NO_x generation is preferred to reduction of exhaust CO value, thereby keeping NO_x value not more than a specified value; and

a CO oxidation catalyst member.